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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,051	01/09/2002	Jaydeep Y. Kokate	29985/01-041A	5006
4743	7590	07/02/2004	EXAMINER	
MARSHALL, GERSTEIN & BORUN LLP			KREMER, MATTHEW J	
6300 SEARS TOWER			ART UNIT	
233 S. WACKER DRIVE			PAPER NUMBER	
CHICAGO, IL 60606			3736	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,051

Applicant(s)

KOKATE ET AL.

Examiner

Matthew J Kremer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 13-15, 20-33 and 35-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16-19 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04152002;10202003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with species i in the reply filed on 6/7/2004 is acknowledged. The Applicant's assertion that claims 34-48 are generic because they also read on a fluorescent material and should be examined by the substantive examiner is not persuasive. Claims 16-48 are broken down into several subspecies based on the physical embodiment of claimed invention as set forth in the Office Action mailed on 3/19/2004. The mere election of species i for the fluorescent material does not mean that these claims are generic when it is clear from the drawings and the written description that different subspecies of physical embodiment were contemplated.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,752,141 to Sun et al. (Sun). Sun teaches a catheter temperature sensor that includes a lumen that is surrounded by jacket 93, a fiber optic cable that includes a core 89 and a cladding 91, and a powdered phosphor material that is held by a binder material in layer 95 at the distal end of the fiber optic cable 89. (Fig. 3A of Sun).

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Sun further teaches a console that includes a light source 43 and means for generating a temperature signal 75. (Fig. 2 of Sun). In regard to claim 8, a trigger delay generator linked to the light source is provided in the form of timing circuits 71. (Fig. 1 of Sun). In regard to claims 11-12, Sun teaches that the fluorescent material can be magnesium fluorogermanate activated with trivalent manganese. (column 7, lines 29-45 of Sun).

4. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,012,809 to Shulze. Shulze teaches a catheter that measures temperature. (Abstract of Shulze) that includes lumen that is surrounded by jacket 140; a fiber-optic cable 130; and a console that includes a processor 112 that determines temperature from the excited fluorescent material and a light source 20. (Figs. 1B-2 and column 8, lines 25-62 of Shulze). In regard to claim 5, the light source can be a laser. (column 5, lines 7-10 of Shulze).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,012,809 to Shulze in view of U.S. Patent 5,456,252 to Vari et al. (Vari). Shulze

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teaches that the light source can be a laser. (column 5, lines 7-10 of Shulze). Shulze does not teach a particular type of laser. Vari teaches a nitrogen laser that would fulfill the requirements of providing a laser as set forth by Shulze. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the nitrogen laser as disclosed by Vari in the device of Shulze since Shulze teaches the use of a laser and Vari teaches one such laser.

7. Claims 1-2, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0114761 to Brown in view of U.S. Patent 6,377,842 to Pogue et al. (Pogue). Brown teaches a catheter that includes a lumen that is surrounded by positioner 26; a fiber-optic cable 96 that is coated with a fluorescent material 94 (since material 94 covers the distal end of cable 96); and a console 22 that comprises means for generating a temperature signal from the light emitted by the excited material. (Fig. 7A and paragraph 0041 of Brown). Brown implies that the optical fiber is used to illuminate the material (paragraph 0056 of Brown) but does not teach a particular type of light source. Pogue teaches a laser that would fulfill the requirement of providing a light source as implied by Brown. (column 3, lines 21-40 of Pogue). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the laser as disclosed by Pogue in the device of Brown since Brown implies a light source is used and Pogue teaches one such light source.

In regard to claim 2, Brown implies that the fluorescence emitted by the material 94 is detected (paragraph 0056 of Brown) but does not teach a particular type of

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detector. Pogue teaches a detection system that would fulfill the requirement of providing a detection system as implied by Brown. (column 3, lines 21-40 of Pogue).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the detection system as disclosed by Pogue in the device of Brown since Brown implies a detection system is used and Pogue teaches one such detection system. In regard to claim 2, Pogue teaches the use of a photo multiplier tube and an oscilloscope. (paragraph 0056 of Brown). Brown teaches the use of a console 22 to be used as a monitor 40, comparator 42, and an indicator 44 (paragraph 0041 of Brown) and it is well known in the art that processors are used for such elements. (column 5, lines 14-26 of Pogue). In regard to claim 5, a laser is disclosed. (column 3, lines 21-40 of Pogue). In regard to claim 9, a filter is disclosed. (column 3, lines 27-32 of Pogue).

8. Claims 3-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0114761 to Brown in view of U.S. Patent 6,377,842 to Pogue et al. (Pogue) as applied to claim 2, and further in view of U.S. Patent 4,652,143 to Wickersheim et al. (Wickersheim). The combination teaches that the luminescent material is magnesium germanate or magnesium fluorogermanate activated with tetravalent manganese and a more detailed description of the material can be found in Wickersheim. (paragraph 0056 of Wickersheim). Wickerheim teaches the luminescent materials but also the analysis method that uses these materials as set forth in the combination. Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to use the analysis methods of Wickersheim in the combination since the combination teaches the use of certain luminescent materials of Wickersheim and Wickersheim teaches the analysis methods that uses these materials. In regard to claim 3, the decay times of the luminescent material is analyzed. (Abstract of Wickersheim). In regard to claim 4, a memory storing a table is disclosed. (column 7, lines 7-11 of Wickersheim). In regard to claim 7, the combination teaches the use of a single fiber 96 (paragraph 0056 of Wickersheim) and an illumination source and a detection assembly (column 3, lines 21-40 of Pogue). A method and apparatus for connecting the illumination source and detection assembly to the single fiber is required. Wickersheim teaches that a beam splitter is used to couple the illumination source and detection assembly to a single fiber as required by the combination. (Fig. 1 of Wickersheim). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the beam splitter to couple the illumination source and detection assembly to a single fiber as disclosed by Wickersheim since the combination requires a method and apparatus for connecting the illumination source and detection assembly to the single fiber and Wickersheim teaches one such method and apparatus.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0114761 to Brown in view of U.S. Patent 6,377,842 to Pogue et al. (Pogue) as applied to claim 2, and further in view of U.S. Patent 5,983,125 to Alfano et al. (Alfano). The combination teaches the use of a filter. (column

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3, lines 27-32 of Pogue). The combination does teach a particular type of filter. Alfano teaches that a bandpass filter that would satisfy the requirements of providing a filter as set forth by the combination. (column 4, lines 36-44 of Alfano). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the bandpass filter as disclosed by Alfano since the combination teaches the use of a filter and Alfano teaches one such filter.

10. Claim 16, 19 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,012,809 to Shulze in view of U.S. Patent 5,378,234 to Hammerslag et al. (Hammerslag). Shulze teaches a catheter that measures temperature. (Abstract of Shulze) that includes lumen that is surrounded by catheter body 140; a fiber-optic cable 130; and a console that includes a processor 112 that determined temperature from the excited fluorescent material and a light source 20. (Figs. 1B-2 and column 8, lines 25-62 of Shulze). Shulze teaches the use of a catheter body 140 (Fig. 2 of Shulze) but does not teach a particular catheter body. Hammerslag a coil polymer composite tubular body (Abstract of Hammerslag) that would fulfill the requirements as set forth by Shulze. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the catheter body of Hammerslag in the device of Shulze since Shulze teaches the use of a catheter body and Hammerslag teaches one such body. In regard to claims 16 and 34, a coil spring is disclosed.

11. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,012,809 to Shulze in view of U.S. Patent 5,378,234 to Hammerslag et al. (Hammerslag) as applied to claim 16, and further in view of U.S. Patent 5,497,782 to Fugoso. The combination teaches a rounded tip for the catheter (Fig. 2 of Shulze) and the tip can comprise a variety of materials (column 4, lines 27-29 of Hammerslag). Fugoso teaches that a weld ball is a sufficient end cap. (column 3, lines 22-25 of Fugoso). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the catheter tip of Fugoso in the combination since the combination teaches the use of a catheter tip and Fugoso teaches one such tip.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J Kremer whose telephone number is 703-605-0421. The examiner can normally be reached on Mon. through Fri. between 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mary Beth Jones can be reached on 703-308-3400. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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